

REMARKS

I. Status of the Claims

Claims 1-33 were originally pending in this application. Claims 1-33 have been cancelled and new claims 34-66 have been added. Claims 34-66 are pending for examination, with claims 34, 44 and 56 being independent claims. Support for the new claims can be found in the specification as filed, for example, in the original claims and Figures 1, 3 and 4. No new matter has been added.

II. The Claims are Patentable over Cote

Claims 1-12, 14, and 17-22 are rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,607,593 to Cote et al. ("Cote"). In light of the cancellation of claims 1-22, this rejection is now moot. Applicant contends that new independent claims 34 and 44 are substantially similar to previously pending independent claims 1 and 11, and therefore responds to the rejection using independent claims 34 and 44 for purposes of comparison.

Independent claims 34 and 44 recite, in part, an aeration/backwash device comprising a communication chamber defined by a peripheral wall that at least partially surrounds a portion of the circumference of a membrane filtration module, the peripheral wall having through-openings spaced circumferentially, and each through-opening having a longitudinal axis substantially perpendicular to the one or more membranes.

Cote fails to teach, disclose, or suggest an aeration/backwash device comprising a communication chamber defined by a peripheral wall that *at least partially surrounds a portion of the circumference of a membrane filtration module*, the peripheral wall having through-openings spaced circumferentially, and each through-opening having a longitudinal axis *substantially perpendicular to the one or more membranes*, as recited, in part, by independent claims 34 and 44. Cote does not disclose a filtration system with a communication chamber as described in the subject claims, but rather discloses structures that are essentially *parallel to the longitudinal axis of the membranes*, as displayed in Figures 5, 6, 9 and 10 of Cote, reproduced below and annotated.

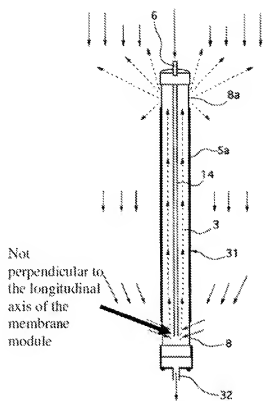


Fig. 5

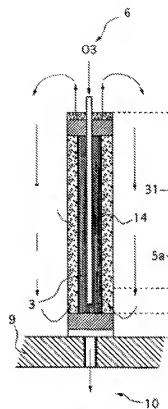


Fig. 6

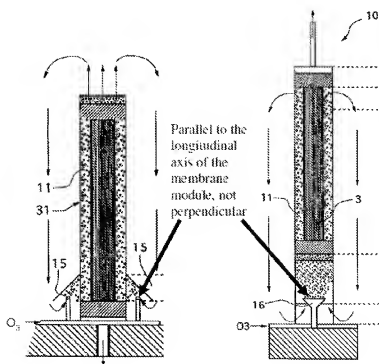


Fig. 9

Fig. 10

In view of the above, Cote does not anticipate independent claims 34 and 44, because it fails to disclose each and every claim element. Applicant respectfully submits that independent claims 34 and 44 and those claims that ultimately depend from them, including dependent claims 35-43 and 45-55, are not anticipated by Cote. Accordingly, reconsideration and withdrawal of the rejection of claims 1-12, 14 and 17-22 under §102(b) as being unpatentable over Cote is respectfully requested.

Dependent claim 13 is rejected under 35 U.S.C. § 103(a) over Cote in view of International Patent Publication No. WO03/013706 to Zha et al. ("Zha"). Dependent claims 15-16 are rejected under § 103(a) over Cote in view of International Patent Publication No. WO02/04101 to Watanabe et al. ("Watanabe"). In light of the cancellation of claims 1-22, this rejection is now moot. Applicant contends that new dependent claims 46 and 48-49 are substantially similar to previously pending dependent claims 13 and 15-16, and therefore responds to the rejection using dependent claims 46 and 48-49 for purposes of comparison.

Since claims 46, 48 and 49 ultimately depend from claim 44, and claim 44 is nonobvious, then it follows that these dependent claims are also nonobvious since they add subject matter to independent claim 44.

As noted above, Cote fails to disclose, teach, or suggest each and every element of independent claim 44. Moreover, one skilled in the art would not have modified Cote to include, for example, an aeration/backwash device comprising at least a communication chamber as recited in the subject claim, since neither Zha nor Watanabe expand beyond the structures disclosed in Cote – none of the cited references utilize any device that can reasonably function as the recited aeration/backwash device. The claims disclose structures that are capable of ensuring that gas and liquid is distributed perpendicularly and as evenly and closely as possible around the module circumference during filtration, backwashing and cleaning processes, which results in increased efficiency and effectiveness. This flexibility is simply not contemplated by Cote, Watanabe, or Zha, either alone or in any combination.

Accordingly, reconsideration and withdrawal of the rejection of claim 13 under §103(a) as being unpatentable over Cote in view of Zha and withdrawal of the rejection of claims 15 and 16 under §103(a) as being unpatentable over Cote in view of Watanabe is respectfully requested.

III. Conclusion

In view of the foregoing amendments and remarks, reconsideration of the claims and withdrawal of the rejections is respectfully requested.

This *Response and Amendment With RCE* is being filed within six months of the mailing date of the *Final Office Action*. Accordingly, Applicant hereby authorizes the Commissioner to charge Deposit Account No. 502762, Ref. No. 2003P87067WOUS (L&A Ref. No. M2019-7064US) in the amount of \$1,110.00 for the three month extension of time, and \$810.00 for the RCE. In addition, Applicant hereby authorizes the Commissioner to charge this account for any miscalculations of fees due, and to credit any overpayment.

Respectfully submitted,
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